Determination of Case Classification for Reportable Medical Events

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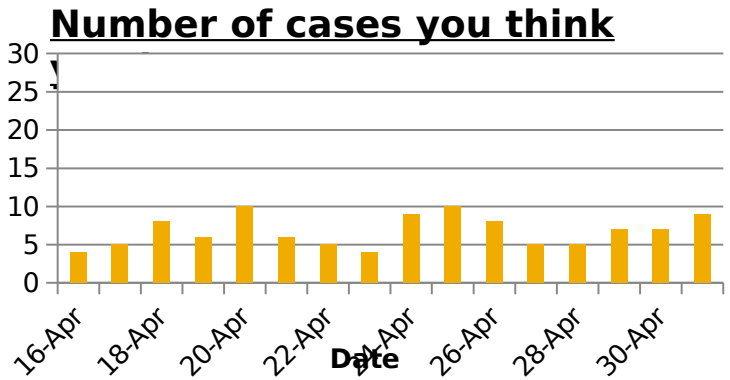
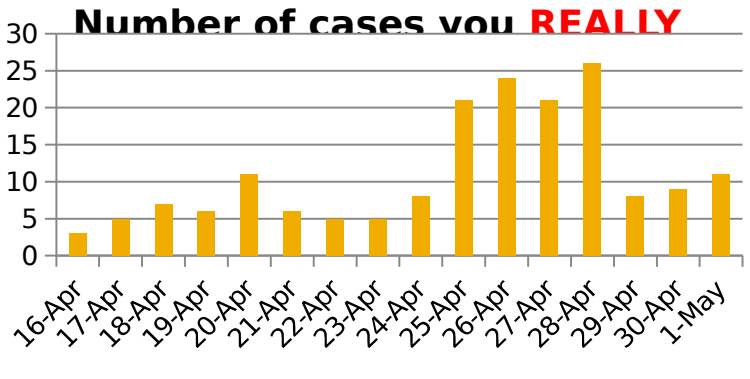
Outline

- Case Definitions within the 2012 Armed Forces Reportable Medical Event Guidelines & Case Definitions
  - Note: Air Force is still utilizing 2009 Guidelines
- Difference between Suspect, Probable and Confirmed
- Examples and practice of case classifications
- Summary

Importance

- Why is proper case classification important:
  - To align with national and international standards
  - To increase data standards across the services and across MTFs
  - To improve timeliness of response
  - To ensure commanders receive most accurate data possible prior to making decisions
  - To ensure accurate tracking at local MTFs





Case Definitions

- Case Definitions can be found within the *Armed Forces Reportable Medical Events Guidelines and Case Definitions* located at: http://afhsc.army.mil/viewDocument?file=TriService_CaseDefDocs/ArmedForcesGuidlinesFinal14Mar12.pdf
  - For the Air Force, the 2009 Guidelines can be found: https://gumbo2.wpafb.af.mil/epi-consult/reportableevents/
- All case definitions used in the guidelines should contain clinical criteria and/or laboratory criteria (example)

- The case classification section of the disease will tell you what is required to meet the case definition
  - With the updates to the guidelines made in 2012, many disease now have three case classifications: Suspect, Probable or Confirmed
  - Be aware of the case classifications available for a disease when entering the case into DRSi or AFRSS

Information Required for Case Classifications

The amount of information and/or the specificity of the testing increases as a disease goes from suspect to confirmed.

Suspect	Probable	Confirmed
Least amount of information or least specific diagnostics	More information and/or greater specificity	Most information and greatest diagnostic specificity

Definitions :

Suspected: A clinically compatible case that is not yet laboratory confirmed and is not epidemiologically linked to a confirmed case

Probable: A clinically compatible case that is epidemiologically linked to a confirmed case and/or supported by non-laboratory diagnostic procedures (e.g., chest x-ray)

Confirmed: A clinically compatible illness that is laboratory confirmed or meets confirmatory clinical diagnosis definition

Amount of Information for Case Classification

	Suspect	Probable	Confirmed
Schistosomiasis	⊘	⊘	Clinically compatible/Positive Laboratory
Leptospirosis	⊘	Clinical information	Clinically compatible/Positive Laboratory
Malaria	Clinical information/limited diagnostic testing	⊘	Positive Laboratory
Measles	General clinical information	More specific clinical information	Positive Laboratory or epi-linked symptomatic case

Common Case Classification Mistakes

- Common Disease Case Classification Mistakes
  - Lyme disease
  - Influenza-Associated Hospitalization
  - Encephalitis, Arboviral (West Nile Virus)
  - Malaria
  - Hepatitis B, Acute & Chronic
  - Hepatitis C
  - *E. coli*, Shiga Toxin-producing
  - Chlamydia
  - Measles
  - Mumps
  - Amebiasis

Example 1: Norovirus

5.38 NOROVIRUS

INCLUDES: Only single cases of disease should be reported under this category/event. Cases associated with an outbreak should be reported under the "Outbreak" category/event.

Clinical Description References 9, 16

An acute, highly contagious viral gastroenteritis characterized by vomiting, watery non-bloody diarrhea with abdominal cramps, and nausea. Vomiting is the most commonly reported symptom and occurs in more than 50% of cases. Low-grade fever also occasionally occurs. Dehydration is the most common complication, especially among the young and elderly, and may require medical attention. Symptoms usually last 24 to 60 hours. Recovery is usually complete and there is no evidence of any serious long-term sequelae. The incubation period for norovirus-associated gastroenteritis in humans is usually between 24 and 48 hours (median in outbreaks 33 to 36 hours), but cases can occur within 12 hours of exposure.

Laboratory Criteria for Diagnosis

Any of the following:

- Detection of virus in stool or vomitus by reverse transcriptase polymerase chain reaction (RT-PCR);
- Fourfold or greater rise in antibody titer in paired sera; or
- Identification of virus in stool by electron microscopy (EM).

Case Classification

Confirmed: A clinically compatible case that is laboratory-confirmed.

Required Comments

None.

Practice

Which case meets the norovirus case classification?

- Name: Jason
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: N/A

- Name: Jane
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing:
  - Positive titer 1:64

- Name: Brad
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: Detection of virus by RT-PCR

Practice

Which case meets the norovirus case classification?

- Name: Jason
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: N/A

Is not laboratory confirmed.

- Name: Jane
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing:
  - Positive titer 1:64

The case should not be reported in DRSi or AFRESS

- Name: Brad
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: Detection of virus by RT-PCR

Practice

Which case meets the norovirus case classification?

- Name: Jason
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: N/A

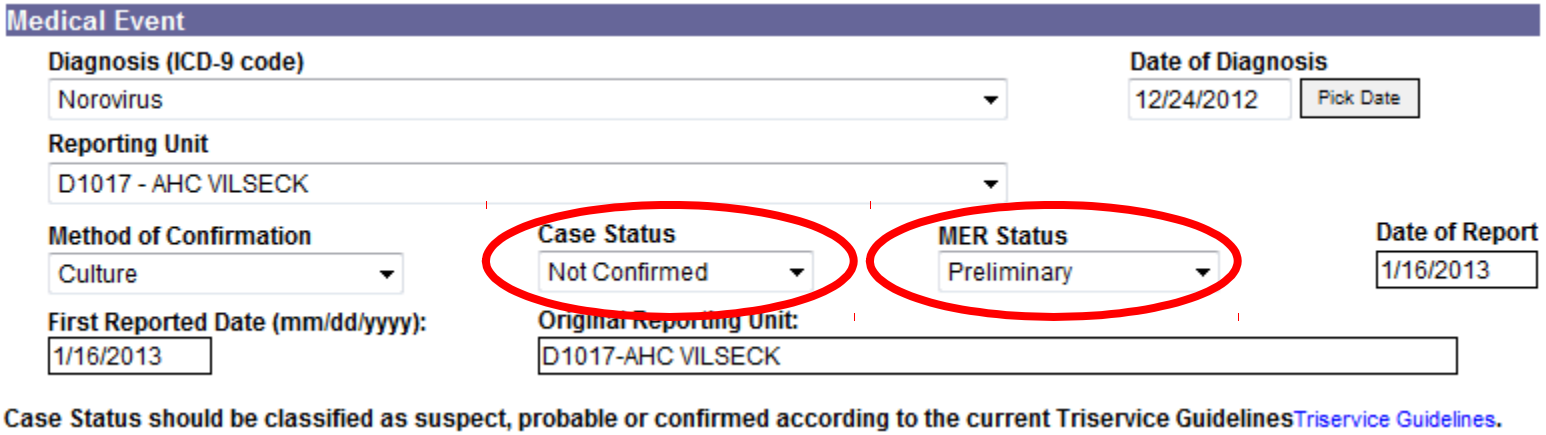
- Name: Jane
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: Positive titer 1:64

- Name: Brad
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: Detection of virus by RT-PCR

Need a convalescent titer in order to meet case definition.
Should list in DRSi as: Case Status: Not Confirmed; MER Status: Preliminary (if you are expecting a convalescent titer)
Do not report in AFRESS: If you do not have a convalescent serum, does not meet the case definition

Practice

This is what the DRSi Screen should look like:



Only list the MER Status as “Preliminary” if you are expecting more information that may change the case status. You will be expected to ensure that the MER Status is changed to “Final” at the end of the year. If you do not expect additional testing that can change the case status then report the case as Not Confirmed and Final.

Practice

Which case meets the norovirus case classification?

- Name: Jason
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: N/A

- Name: Jane
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing:
    - Positive titer 1:64

- Name: Brad
  - Onset: 10 December 2012
  - Duration of symptoms: 24 hours
  - Symptoms: nausea, vomiting, diarrhea
  - Treatment: bed rest & fluids
  - Laboratory Testing: Detection of virus by RT-PCR

A clinically compatible case that meets the laboratory criteria.
Should list in DRSi as: Case Status: Confirmed MER Status: Final
Should list in AFRESS as: Case Confirmed: Yes. Then choose a laboratory confirmation method from the drop down menu. Case closed: Yes

Example 2: Influenza-Associated Hospitalization

Clinical Case Definition

An illness compatible with influenza virus infection (fever ≥100.5°F accompanied by cough or sore throat in the absence of other diagnoses) in individuals **< 65 years of age** that results in hospitalization.

AND

Laboratory test confirmation or positive rapid test result supporting influenza diagnosis obtained less than 4 days after hospital admission (to minimize the reporting of nosocomial [hospital acquired] rather than community acquired infections).

Comment

Hospitalization is defined as an admission to an inpatient ward of a hospital, or a medical transfer or evacuation to a facility with a higher level of care. Patients admitted for observation and discharged the same day are considered hospitalized for this case definition. An overnight stay is not required. Emergency room or outpatient clinic visits that do not result in hospital admission are not considered hospitalizations.

Laboratory Criteria for Diagnosis

Any of the following:

Probable:

- Commercial influenza diagnostic rapid antigen test (RAT) of respiratory specimens.

Confirmed:

- Detection of influenza-specific RNA by RT-PCR testing of respiratory specimens;
- Influenza virus isolation in tissue cell culture from respiratory specimens;
- Direct antigen detection by immunofluorescent antibody (IFA) staining (direct or indirect) of respiratory specimens;
- Antigen detection by immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract or other tissue from biopsy or autopsy specimens; or
- Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera.

Case Classification

Probable: A hospitalization for acute illness associated with a diagnosis of influenza with a positive result from a rapid antigen test (RAT). A confirmatory test should be ordered following a positive RAT.

Confirmed: A hospitalization for acute illness associated with a diagnosis of influenza and confirmed by an appropriate laboratory test as defined above.

Practice

Which case meets the 2012 Influenza case classification**?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Duration of symptoms: 2 days
  - Symptoms: Fever (99.6°F), cough, sore throat
  - Admitted: No
  - Laboratory Testing: Positive RAT*
- Name: Jane
  - Age: 45
  - Onset: 10 December 2012
  - Duration of symptoms: 5 days
  - Symptoms: Fever (100.6°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Positive RAT*
- Name: Brad
  - Age: 67
  - Onset: 7 December 2012
  - Duration of symptoms: 7 days
  - Symptoms: Fever (101°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Positive RAT* and isolation of virus through cell culture
- Name: Cindy
  - Age: 37
  - Onset: 24 December 2012
  - Duration of symptoms: 4 days
  - Symptoms: Fever (103°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus through cell culture

*RAT: Rapid Antigen Test

**The next few slides are for Army and Navy only because they utilize the 2012 Influenza case definition while the Air Force still uses the 2009 definitions

Practice

Which case meets the 2012 Influenza case classification?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Duration of symptoms: 2 days
  - Symptoms: Fever (99.6°F), cough, sore throat
  - Admitted: No
  - Laboratory Testing: Positive RAT*
- Name: Jane
  - Age: 45
  - Onset: 10 December 2012
  - Duration of symptoms: 5 days
  - Symptoms: Fever (100.6°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Positive RAT*
- Name: Brad
  - Age: 67
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  - Duration of symptoms: 7 days
  - Symptoms: Fever (101°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Positive RAT* and isolation of virus through cell culture
- Name: Cindy
  - Age: 37
  - Onset: 24 December 2012
  - Duration of symptoms: 4 days
  - Symptoms: Fever (103°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus through cell culture

A clinically compatible case that meets the "Probable" laboratory criteria, however the patient was not admitted which is required in the clinical case definition:

The case should **NOT** be reported

Practice

Which case meets the 2012 Influenza case classification?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Duration of symptoms: 2 days
  - Symptoms: Fever (99.6°F), cough, sore throat
  - Admitted: No
  - Laboratory Testing: Positive RAT*
- Name: Jane
  - Age: 45
  - Onset: 10 December 2012
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  - Admitted: Yes
  - Laboratory Testing: Positive RAT* and isolation of virus through cell culture
- Name: Cindy
  - Age: 37
  - Onset: 24 December 2012
  - Duration of symptoms: 4 days
  - Symptoms: Fever (103°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus through cell culture

A clinically compatible case that meets the laboratory criteria for the "Probable" case classification. RAT is not considered a confirmatory test, but it is sufficient for a Probable case.

Should list in DRSi as: Case Status: Probable; MER Status: Final

Practice

Which case meets the 2012 Influenza case classification?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Duration of symptoms: 2 days
  - Symptoms: Fever (99.6°F), cough, sore throat
  - Admitted: No
  - Laboratory Testing: Positive RAT*
- Name: Jane
  - Age: 45
  - Onset: 10 December 2012
  - Duration of symptoms: 5 days
  - Symptoms: Fever (100.6°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Positive RAT*
- Name: Brad
  - Age: 67
  - Onset: 7 December 2012
  - Duration of symptoms: 7 days
  - Symptoms: Fever (101°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Positive RAT* and Isolation of virus through cell culture
- Name: Cindy
  - Age: 37
  - Onset: 24 December 2012
  - Duration of symptoms: 4 days
  - Symptoms: Fever (103°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus through cell culture

A clinically compatible case that meets the laboratory criteria for the "Confirmed" case classification. However, that patient is not <65 year old as described in the clinical case definition.

The case should not be reported

(note some MTFs may report non-confirmed events for their own local tracking)

Practice

Which case meets the 2012 Influenza case classification?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Duration of symptoms: 2 days
  - Symptoms: Fever (99.6°F), cough, sore throat
  - Admitted: No
  - Laboratory Testing: Positive RAT*
- Name: Jane
  - Age: 45
  - Onset: 10 December 2012
  - Duration of symptoms: 5 days
  - Symptoms: Fever (100.6°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Positive RAT*
- Name: Brad
  - Age: 67
  - Onset: 7 December 2012
  - Duration of symptoms: 7 days
  - Symptoms: Fever (101°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Positive RAT* and isolation of virus through cell culture
- Name: Cindy
  - Age: 37
  - Onset: 24 December 2012
  - Duration of symptoms: 4 days
  - Symptoms: Fever (103°F), cough, sore throat
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus through cell culture

A clinically compatible case that meets the laboratory criteria for the "Confirmed" and meets the age/hospitalization requirements outlined the Clinical Case Definition.

Report in DRSi as: Case Status: Confirmed; MER Status: Final

Example 3: West Nile Virus

5.16 ENCEPHALITIS, ARBOVIRAL

INCLUDES: Mosquito-borne encephalitis (Western Equine encephalitis, Eastern Equine encephalitis, St. Louis encephalitis, California virus encephalitis), Tick-borne encephalitis, West Nile Virus, Chikungunya, Japanese encephalitis and others.

EXCLUDES: Bacterial Meningoencephalitis (*Haemophilus influenzae* type b, *Neisseria meningitidis*, and *Streptococcus pneumoniae* bacteria), RMSF, Rift Valley Fever, Rabies, are all reported separately.

Clinical Description References 5 – 7

Encephalitis is a broad category of central nervous system infections. Symptoms can include headache, confusion or other alteration in sensorium, nausea, and vomiting. Signs may include fever, meningismus (e.g., neck stiffness, intolerance of bright light, headache), cranial nerve palsies (involving the muscles of the face), paresis or paralysis, sensory deficits, altered reflexes, convulsions, abnormal movements, or coma of varying degree.

Arboviral infections may result in a febrile illness of variable severity associated with neurologic symptoms ranging from headache to aseptic meningitis (e.g. inflammation of protective membranes covering the brain and spinal cord not due to bacterial infection) or encephalitis. The seasonality of arboviral transmission is variable and depends on the geographic location of exposure, the specific cycles of viral transmission, and local climatic conditions.

Laboratory Criteria for Diagnosis

Any of the following:

- Fourfold or greater change in virus-specific serum antibody titer;
- Isolation of virus from, or demonstration of viral antigen or genomic sequences in, tissue, blood, cerebrospinal fluid (CSF), or other body fluid;
- Virus-specific immunoglobulin M (IgM) antibodies demonstrated in CSF by antibody-capture enzyme immunoassay (EIA); or
- Virus-specific IgM antibodies demonstrated in serum by antibody-capture EIA and confirmed by demonstration of virus-specific serum immunoglobulin G (IgG) antibodies in the same or a later specimen by another serologic assay (e.g., neutralization or hemagglutination inhibition).

Case Classification

Probable: Viral transmission is likely, with the following supportive serology: a stable (≤twofold change) elevated antibody titer to an arbovirus (e.g., ≥320 by hemagglutination inhibition, ≥128 by complement fixation, ≥ 256 by immunofluorescence, ≥ 160 by neutralization, or ≥ 400 by enzyme immunoassay IgM).

Confirmed: A clinically compatible case that is laboratory-confirmed.

Practice

Which case meets the Encephalitis/Arboviral case classification?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus from CSF
- Name: Jane
  - Age: 45
  - Onset: 7 September 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing:
    - WNV IgG Ab 1:16
- Name: Brad
  - Age: 67
  - Onset: 7 September 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing:
    - WNV IgG Ab 1:16
    - Follow-up IgG Ab 1:240

Practice

Which case meets the Encephalitis/Arboviral case classification?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Symptoms: Headache, fever, nausea, neck stiffness
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus from CSF
- Name: Jane
  - Age: 45
  - Onset: 7 September 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing:
    - WNV IgG Ab 1:16
- Name: Brad
  - Age: 67
  - Onset: 7 September 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing:
    - WNV IgG Ab 1:16
    - Follow-up IgG Ab 1:240

A clinically compatible case that meets the laboratory criteria.
Should list in DRSi as: Case Status: Confirmed MER Status: Final
Should list in AFRESS as: Case Confirmed: Yes. Then choose a laboratory confirmation method from the drop down menu. Case closed: Yes

Practice

Which case meets the Encephalitis/Arboviral case classification?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Symptoms: Headache, fever, nausea, neck stiffness
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus from CSF
- Name: Jane
  - Age: 45
  - Onset: 7 September 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing:
    - WNV IgG Ab 1:16
- Name: Brad
  - Age: 67
  - Onset: 7 September 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing:
    - WNV IgG Ab 1:16
    - Follow-up IgG Ab 1:240

A clinically compatible case that does not meets the laboratory criteria.
Should list case in DRSi as: Case Status: Not Confirmed MER Status: Preliminary (if you are expecting a convalescent titer)
Should not report this case in AFRESS:

Practice

Which case meets the Encephalitis/Arboviral case classification?

- Name: Jason
  - Age: 56
  - Onset: 13 December 2012
  - Symptoms: Headache, fever, nausea, neck stiffness
  - Admitted: Yes
  - Laboratory Testing: Isolation of virus from CSF
- Name: Jane
  - Age: 45
  - Onset: 7 September 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing:
    - WNV IgG Ab 1:16
- Name: Brad
  - Age: 67
  - Onset: 7 September 2012
  - Symptoms: Headache, fever, nausea
  - Admitted: Yes
  - Laboratory Testing:
    - WNV IgG Ab 1:16
    - Follow-up IgG Ab 1:240

A clinically compatible case that meets the laboratory criteria.
Should list in DRSi as: Case Status: Confirmed MER Status: Final
Should list in AFRESS as: Case Confirmed: Yes. Then choose a laboratory confirmation method from the drop down menu. Case closed: Yes

Others to be aware of: Hepatitis B, Acute & Chronic

5.25 HEPATITIS B, ACUTE & CHRONIC

Clinical Description Reference 1, 15

Hepatitis B is a viral infection of the liver and has two possible phases: acute and chronic. The acute phase, if not resolved, will proceed to chronic illness. After acute HBV infection, the risk of developing chronic infection varies inversely with age. Chronic infection occurs among 90% of infants infected at birth, 20%-50% of children infected from 1-5 years old and 1%-10% of persons infected as older children and adults. Individuals may present in either phase with clinical illness or may be asymptomatic. In those with clinical illness, the onset is usually insidious with anorexia, vague abdominal discomfort, nausea and vomiting, sometimes arthralgias and rash, often progressing to jaundice. Fever may be absent or mild. Severity ranges from unapparent cases detectable only by liver function tests to fulminating, fatal cases of acute hepatic necrosis.

Clinical Case Definition

1. **Acute illness:** This refers to newly acquired infections. Affected individuals may notice symptoms in 1 to 4 months after exposure to the virus. Most people with acute hepatitis will have resolution of illness in a few weeks to months and will then be cured of disease and immune to HBV. However, only a small proportion of acute hepatitis B infections may be clinically recognized. If the infection does not resolve, it will then proceed to chronic hepatitis B.
2. **Chronic illness:** Occurs if acute illness does not resolve. Resolution is marked by the conversion of HBsAg to anti-HBs. The persistence of HBsAg for more than six months implies chronic infection. Persons with chronic HBV infection may have no evidence of liver disease or may have a spectrum of disease ranging from mild cirrhosis to liver failure or hepatocellular carcinoma.

Laboratory Criteria for Diagnosis

1. Acute Hepatitis B: (Any of the following)
   - IgM antibody to hepatitis B core antigen (IgM anti-HBc) positive, or
   - Hepatitis B surface antigen (HBsAg) positive AND chronic illness has been ruled out*
2. Chronic Hepatitis B: (Any of the following)
   - Negative for IgM antibodies to hepatitis B core antigen (IgM anti-HBc) **AND** a positive result on one of the following tests: hepatitis B surface antigen (HBsAg), hepatitis B e antigen (HBeAg), or hepatitis B virus (HBV) DNA, or
   - HBsAg positive or HBV DNA positive or HBeAg positive two times at least 6 months apart (Any combination of these tests performed 6 months apart is acceptable).

**Persons who have chronic hepatitis or who are identified as HbsAg positive should not be reported as having acute viral hepatitis B unless chronic hepatitis B can be ruled out. Chronic hepatitis B can be ruled out by the presence of IgM anti-HBc*

Note: Positive anti-HBe is indicative of a resolving acute infection. Retesting should be completed in 6 months.

Case Classification

1. **Acute Hepatitis B:**
   - ***Confirmed:*** A clinically compatible case that is laboratory-confirmed and **is not known to have chronic hepatitis B.**
2. **Chronic Hepatitis B:**
   - ***Confirmed:*** A clinically compatible case that is laboratory-confirmed and **has no prior diagnosis of chronic hepatitis B**. Laboratory confirmation should have a serological pattern consistent with chronic HBV. History of acute HBV may be useful, but not absolutely necessary.

Notice there are two different:

- Clinical Case definitions
- Laboratory Criteria for Diagnosis
- Case Classification

Each dependent on if the disease is acute or chronic

Others to be aware of: Lyme disease

Laboratory Criteria for Diagnosis

Any of the following:

For the purposes of surveillance, the definition of a qualified laboratory assay is

- Positive Culture for B. burgdorferi;
- Two-tier testing interpreted using established criteria [1], where:
  - Positive IgM is sufficient only when ≤30 days from symptom onset
  - Positive IgG is sufficient at any point during illness
- Single-tier IgG immunoblot seropositivity using established criteria [1-4]; or
- CSF antibody positive for *B. burgdorferi* by Enzyme Immunoassay (EIA) or Immunofluorescence Assay (IFA), when the titer is higher than it was in serum.

Case Classification

Suspected:

- A case of EM where there is no known exposure (as defined above) and no laboratory evidence of infection (as defined above), or
- A case with laboratory evidence of infection but no clinical information available (e.g. a laboratory report).

Probable: Any other case of physician-diagnosed Lyme disease that has laboratory evidence of infection (as defined above).

Confirmed:

- A case that meets the clinical criteria for diagnosis of EM with a known exposure;
- A case of EM with laboratory evidence of infection and without a known exposure; or
- A case with at least one late manifestation that has laboratory evidence of infection.

Exposure is defined as having been (≤ 30 days before onset of EM) in wooded, brushy, or grassy areas (i.e., potential tick habitats) in a county in which Lyme disease is endemic. A history of tick bite is not required.

Others to be aware of: Lyme disease

Laboratory Criteria for Diagnosis

Any of the following:

For the purposes of surveillance, the definition of a qualified laboratory assay is

- Positive Culture for B. burgdorferi;
- Two-tier testing interpreted using established criteria [1], where:
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Probable: Any other case of physician-diagnosed Lyme disease that has laboratory evidence of infection (as defined above).

Confirmed:

- A case that meets the clinical criteria for diagnosis of EM with a known exposure;
- A case of EM with laboratory evidence of infection and without a known exposure; or
- A case with at least one late manifestation that has laboratory evidence of infection.

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Case Classification

Suspected:

- A case of EM where there is no known exposure (as defined above) and no laboratory evidence of infection (as defined above), or
- A case with laboratory evidence of infection but no clinical information available (e.g. a laboratory report).

Probable: Any other case of physician-diagnosed Lyme disease that has laboratory evidence of infection (as defined above).

Confirmed:

- A case that meets the clinical criteria for diagnosis of EM with a known exposure;
- A case of EM with laboratory evidence of infection and without a known exposure; or
- A case with at least one late manifestation that has laboratory evidence of infection.

Exposure is defined as having been (≤ 30 days before onset of EM) in wooded, brushy, or grassy areas (i.e., potential tick habitats) in a county in which Lyme disease is endemic. A history of tick bite is not required.

Summary

- The case only needs to be reported **ONCE**
  - As lab results come back, update the case accordingly
  - For DRSi users, ensure you list the *MER Status* as "Preliminary" if you are awaiting future results that could change the Case Status
    - Ensure you close out the "Preliminary" cases by changing the MER Status to "Final"
- Case classification had to be *confirmed* for most RME's in the 2009 Guidelines in order to report, however many RME's in the 2012 Guidelines can have a case classification status of *suspected* or *probable* to report
  - Be sure to check the guidelines for each disease prior to reporting
  - Don't enter the case classification as "Suspect" or "Probable" just because you don't have enough information to confirm the disease, be aware that those case classification have their own case definition

References

- 2012 Armed Forces Reportable Medical Event Guidelines and Case Definitions: http://afhsc.army.mil/viewDocument?file=TriService_CaseDefDocs/ArmedForcesGuidlinesFinal14Mar12.pdf
- 2009 Tri-Service Reportable Medical Event Guidelines: https://gumbo2.wpafb.af.mil/epi-consult/reportableevents/
- Centers for Disease Control (CDC): http://www.cdc.gov/
- Navy and Marine Corps Public Health Center: http://www.med.navy.mil/sites/nmcphc/Pages/Home.aspx
- USAF School of Aerospace Medicine Epidemiology Consult Service: https://gumbo2.wpafb.af.mil/epi-consult/index.cfm
- U.S Army Public Health Command: http://phc.amedd.army.mil/Pages/default.aspx

Questions

- **Army:** USAPHC – Disease Epidemiology Program
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- **Navy:** Contact your cognizant **NEPMU**
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  Email: NEPMU2NorfolkThreatAssessment@med.navy.mil
  NEPMU5: COMM: (619) 556-7070; DSN (312) 526-7070
  Email: ThreatAssessment@med.navy.mil
  NEPMU6: COMM: (808) 471-0237; DSN: (315) 471-0237
  Email: NEPMU6ThreatAssessment@med.navy.mil

- **Air Force:** Contact your **MAJCOM PH or USAFSAM/PHR**
  USAFSAM / PHR / Epidemiology Consult Service